Astronomy

4-3 The student will demonstrate an understanding of the properties, movements, and locations of objects in the solar system. (Earth Science)

4-3.2 Compare the properties (including the type of surface and atmosphere) and the location of Earth to the Sun, which is a star, and the Moon.
Taxonomy level: 2.6-B Understand Conceptual Knowledge

Previous/Future knowledge: This information on Earth, the Moon, and the Sun is being considered for the first time. Students in 1st grade (1-3.1), studied the Sun and the Moon as objects in the sky but did not study their properties as objects in space. In 8th grade (8-4), other properties from other planets will be studied and compared.

It is essential for students to know that even though the Sun, the Moon and Earth are all in the solar system, they have different properties.

Earth
- Earth has a rocky surface as a planet and also has water on it.
- It has an atmosphere of gases around it.
- It orbits millions of miles from the Sun as the third planet in the solar system.

Sun
- The Sun is a star, a large ball of glowing gases that is extremely hot.
- It does not have a rocky surface and its atmosphere glows and gives off light.
- It is located at the center of the solar system.
- Earth and other planets revolve around it.

Moon
- The Moon is the natural satellite that orbits the Earth.
- It has a rocky, dusty surface with many craters and no water.
- It has no atmosphere.

It is not essential for students to know more specific data about Earth compared to the Sun and the Moon, for example, time of revolution or rotation with this indicator.

Assessment Guidelines:
The objective of this indicator is to *compare* the properties and locations of Earth, the Moon, and the Sun; therefore, the primary focus of assessment should be to detect ways that these objects are alike and different as to type of surface, atmosphere, and location. However, appropriate assessments should also require students to *identify* the object based on its description; or *illustrate* the objects by their location in the solar system.